amount of chelating agent sufficient to increase the brightness of the pulp over the brightness of pulp which has been treated with a chelating agent after a final washing or extraction stage of the bleaching process whereby an absorbable organic halide content of the bleached pulp is significantly reduced] at a pH within the range of from about 1 to about 6 with a chelating agent during a second chlorine dioxide bleach stage following a first chlorine dioxide-containing bleach stage and, thereafter, as the next and final bleaching stage after the second chlorine dioxide bleach stage, treating the pulp with a peroxide bleach agent, whereby the peroxide-treated pulp exhibits a substantial improvement in viscosity retention and brightness over the same pulp in the absence of treatment with the chelating agent during the second chlorine dioxide bleach stage.

a3 Claim 6 (amended). The method of Claim 1 wherein the pulp has a pH in the range of from about 3 to about [7,] 6 and is maintained at a temperature in the range of from about 35°C to about 90°C during the treatment with the chelating agent.

Claim 7 (amended). The method of Claim 1 wherein the [contacting] treatment with the chelating agent is conducted for [a period of time ranging] from about 30 seconds to about 3 hours.

a4 Claim 10 (amended) The method of Claim [9] 1 further comprising contacting the pulp with one or more peroxide stabilizers during treatment with the peroxide bleach agent.

a5 Claim 15 (amended) The method of Claim 14 wherein the pulp is [contacted] treated with the chelating agent during both the first chlorine dioxide [initial chlorination] stage and during the second chlorine dioxide stage.

a6 Claim 19. (amended). A process for bleaching a pulp containing lignocellulosic fibers comprising:

[maintaining the pulp at a consistency in the range of from about 0.5% to about 40% and maintaining the pH in the range of from about 1 to about 9;]

bleaching the pulp with a [chlorine] chlorine-containing compound in [a] an initial bleaching stage; [and]

treating the pulp in an extraction stage following the initial bleaching stage wherein the extraction stage contains oxygen and/or peroxide;

[contacting] thereafter treating the pulp during a chlorine dioxide bleaching stage or during an optional wash carried out immediately after the chlorine dioxide bleaching stage [or

before a washing stage after the bleaching stage], at a pH within the range of from about 1 to about 6, with from about 0.01 wt.% to about 1 wt. % chelating agent, based on the dry weight of fibers in the pulp, for a period of time sufficient to substantially improve the brightness of the pulp; and

treating the pulp with a peroxide bleach agent in a final bleaching stage subsequent to the chlorine dioxide bleaching stage [,whereby an absorbable organic halide content of the pulp is significantly reduced].

a7 Claim 22 (amended). The process of Claim 19 further comprising [contacting] treating the pulp with the chelating agent at one or more points during [substantially the same time as the pulp is bleached with] the chlorine dioxide [chlorine-containing] bleaching stage [compound].

a8 Claim 25 (amended). The process of Claim 19 wherein the pulp has a pH in the range of from about 3 to about [7,] 6 and is maintained at a temperature in the range of from about 35°C to about 90°C during the treatment with the chelating agent.

Claim 26 (amended). The process of Claim 19 wherein the [contacting] treating step with the chelating agent is conducted for [a period of time ranging] from about 30 seconds to about 3 hours.

a9 Claim 29 (amended) The [method] process of Claim [28] 19 further comprising contacting the pulp with one or more peroxide stabilizers during treatment of the pulp with the peroxide bleach agent.

Claim 30 (amended). The process of Claim 19 further comprising [contacting] treating the pulp with the chelating agent during the [an] initial [chlorine or chlorine dioxide] bleaching stage [step].

a10 Claim 33 (amended). The process of Claim 32 wherein the pulp is [contacted] treated with the chelating agent during both the initial chlorine-containing bleaching stage [chlorination step] and during the chlorine dioxide stage [step].

a11 Claim 36. (amended). A process for bleaching a digested kraft pulp containing lignocellulosic fibers with chlorine and non-chlorine-containing bleaching agents,

wherein the pulp has a consistency in the range of from about 0.5% to about 40% [and has a pH in the range of from about 1 to about 9], the process comprising:

[treating] bleaching the pulp with chlorine dioxide in a first [chlorination] bleach stage;

treating the pulp in an extraction stage following the first bleach stage wherein the extraction stage contains oxygen and/or peroxide;

a 11

[contacting] treating the [chlorinated] pulp [with a first amount of] during a second chlorine dioxide bleach stage following the extraction stage with a metal chelating agent [subsequent to the first chlorination stage] at a pulp pH ranging from about 1 to about 6, wherein the amount of chelating agent is sufficient to substantially reduce an organic halide content of the bleached pulp and wherein the temperature of the pulp during the [contacting] treating is within the range of from about 35° to about 110°C; and

bleaching the [chlorinated] pulp with a [chlorine-free bleaching] peroxide bleach agent [after contacting with the chelating agent] in a bleach stage after the second chlorine dioxide bleach stage without any intermediate treatment between the peroxide stage and the second chlorine dioxide stage other than an optional wash.

---

a 12

Claim 41 (amended). The process of Claim 36 wherein the pulp has a pH in the range of from about 3 to about [7,] 6 and a temperature in the range of from about 35°C to about 90°C during the second chlorine dioxide bleach stage.

Claim 42 (amended). The process of Claim 36 wherein the second chlorine dioxide bleach stage is carried out for [contacting is conducted for a period of time ranging] from about 30 seconds to about 3 hours.

---

a 13

Claim 44 (amended) The process of Claim [43] 36 further comprising contacting the pulp with one or more peroxide stabilizers during the bleaching stage employing peroxide.

Claim 45 (amended) The process of Claim 36 further comprising [bleaching the pulp with chlorine dioxide in a second bleaching stage and contacting] treating the pulp with [a second] an amount of chelating agent during [or after] the [second] first chlorine-dioxide bleaching stage.
